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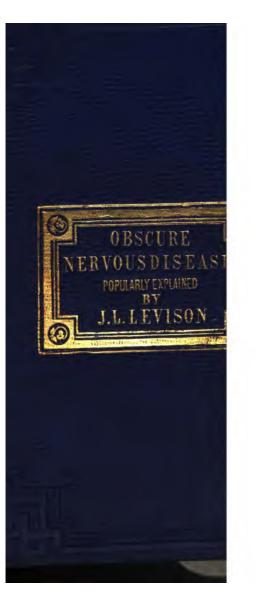
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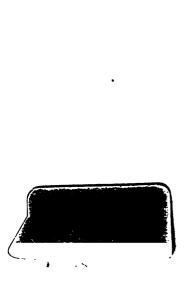
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### OBSCURE

# NERVOUS DISEASES

POPULARLY EXPLAINED.

THE EXPERIENCE OF YEARS CONDENSED IN A FEW PAGES.

BRING

SIX LETTERS,

ADDRESSED TO A PHYSICIAN,

ON THE MANY NERVOUS AFFECTIONS

DENTAL IRRITATION,

AND

OTHER SOURCES OF REFLEX-NERVOUS DISTURBAN

BY

## J. L. LEVISON

Nedicated, by permission, to Nr. Conolly.

LONDON:

EFFINGHAM WILSON, ROYAL EXCHANGE.

1856.

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## Dedication

TO

## JOHN CONOLLY, M.D., ETC., HANWELL

MY DEAR SIR,

In addressing the following letters to you, I have not the temerity to suppose that the views propounded in them will present any novel opinions to one who has made the Brain and Nervous System a profound study for so many years.

When, therefore, I requested your permission to dedicate them to you, it was from a consciousness that you would not object to give every encouragement to even the humblest student who had laboured in the same path in which you had obtained so much deserved approbation and respect.

My own wishes have always been to be useful in my day and generation: and under your auspicious aid, I may hope my labours may not be altogether in vain. For it will be obvious to you, that the views propounded are in accordance with the known laws of the Nervous System.

Yet with all the existing knowledge, it must be confessed, there is often an obscurity in deciding on the exact source of irritation, so as to form a correct diagnosis; and hence many have to endure the most excruciating agony without obtaining either mitigation or relief.

Impressed with this conviction, I have condensed in these letters many years' experience and patient observation, on a class of Nervous Diseases, which have often baffled the judgment of the most skilful. And may therefore hope that some little advantage may result from my present communication.

Grateful for the readiness and courtesy with which you have acceded to my request.

I am, my dear sir,

With most respectful esteem,

Yours very truly,

J. L. LEVISON.

Dorset Place, Dorset Square, London;
 November 25th, 1855.

## OBSCURE NERVOUS DISEASES.

#### LETTER I.

What constitutes a normal condition of man.—Observations on exclusive physical training, and extreme culture of the mental faculties.—The results of the latter in a state of civilization.—How it is proposed to treat of the many anomalous kinds of nervous diseases.—Some attempt to explain, popularly, what is understood by reflex nervous action.—Speculation on the exclusive intensity of consciousness in nervous affections.

MY DEAR SIR,—A very natural question is suggested when any attempt is made to treat of the many sources of nervous diseases,—"What constitutes a normal condition of man?" and the reply would seem to be, when there exists a perfect harmony between the functions of the body, including mastication, digestion, respiration, circula-

tion, and assimilation; and when there exists also a similar harmony in the manifestation of the mental faculties.

Firstly. We find in many of the aboriginal tribes, that physical training is perfect. From infancy the bodily powers are exercised, and the greater portion of time, at the period of the progressive development of the individual, is spent in the open air.

The results are well marked. Such a one has stalwart limbs, a capacious chest, an active circulation, and a constant supply of pure oxygen; and as a consequence, his digestion is rapid, bringing him perfect repose and increased strength. Thus he treads the earth with a firm step, performs feats of bodily vigour, with the most graceful and agile motion of his limbs, whether in the hunt or on the battle field.

But the neglect of all systematic mental training, with the exception of the external senses and the most simple perceptions, render his mind stunted, and he is, therefore, incapable of appreciating the purer sources of pleasure which are experienced by one whose intellectual and moral powers have been well cultivated.

Secondly. If we take an example from a highly cultivated and refined people, we shall perceive, as a general rule, that this mind-culture is made at the expense of great bodily deterioration. The limbs are enfeebled, the chest contracted, the abdomen enlarged; digestion is deranged, the circulation irregular, and the brain and nervous system are rendered so irritable, from too great susceptibility, that morbid disturbance in protean forms is the necessary consequence.

It is therefore an inevitable inference that a model man must combine physical training and intellectual culture, so that there may exist a harmony between all the respective functions which constitute his being; and then he would derive the exquisite enjoyment of perfect health, and perform his mission as an intelligent and responsible agent. Alas! when we contemplate the vast amount of

human suffering induced by nervous disturbance, amongst the most favoured races of men, we are led to ask, is this an inevitable penalty, or is it the natural consequence of not submitting to all the laws necessary for the due performance of the functions of our wonderfully formed bodies. As it is impossible to use even an ordinary machine unless we know something of its structure, so it is equally, nay more unlikely to ensure the harmonious action of our own organization if ignorant of its general mechanism.

We are, however, quite aware that from its complex nature, it is impossible for the mass of society to attain any profound information, yet there might be so much knowledge imparted, as a part of general education, to enable every one to take cognizance of any functional derangement of any important vital power.

If, for example, it was inculcated that, when there existed severe pain in any part, it should be regarded as the warning of an unerring monitor, to intimate that some disturbance had commenced; and without manifesting either an undue terror or a stolid indifference, induce one, so informed, to seek the aid of those who had devoted all their time and study to investigate the phenomena of health and disease. If, therefore, any one suffer from some painful nervous disturbance, it should be regarded as a criminal act against himself, and in violation of the inherent law of "self-preservation" to neglect it.

The cause may be either in the brain; in the nerves of the spine; in morbid conditions of the organs of digestion, or respiration and circulation; and lastly, in the mouth.

It is then, for the professional adviser, whose previous studies have qualified him for the benevolent task, to decide the probable seat of the affection.

When the irritation is confined to the brain and its membranes, such an interpreter of Nature's laws, distinguishes at once, whether it is a functional disturbance or the result of some organic injury: or whether

the affection is induced by a similar condition of the spinal nerves, or from some injury of its substance; or from distortion of its bony case.

For whenever either of these disturbing influences occur, they present so many marked symptoms as to be clearly defined. But they will not form any necessary portion of my present communication. My own purpose is to explain some of the more anomalous kinds of nervous affections, induced by what is called "reflex action," and which often baffle even the most skilful and learned practitioners.\*

These letters have not been written for those who know, but for those who may have suffered for years, and to inspire such afflicted beings with hope, that most cases may be mitigated if not cured.

\* The sequel will form an additional argument for the advantage of special observations in particular departments of the human organism. For then the phenomena induced by any local disturbing influence may be carefully noticed and minutely recorded.

There is, however, much difficulty to impart any information on the speciality of my subject to the uninitiated. It will not be sufficient to say, when speaking of some very curious cases, that the effects are the result of reflex-nervous action, so as to impress them with the importance of this knowledge. As an example, suppose we tell a bilious patient who complains of very intense pain under the blade bone of the shoulder, that it is owing to a disordered state of the liver, he will ask with a stare of incredulity, why there should be suffering in one place for the perverted action of a remotely situated organ. To any physiological explanation which may be given, he may assent, more from faith than conviction.

But if a literary man or merchant complains of severe pains in his head, loss of appetite, and an actual disrelish for food, ask him if he has not had too much mental application and too little bodily exercise; if he confess that such is the case, then there is

a probability of propounding the cause to him. Not by any learned disquisition on the pneumo-gastric nerve and its connection with the sensorium, but by explaining, that the brain is presumed to elaborate a something which has been called "nervous life,"\* and which seems to be essential for the normal functions of the body: and that, therefore, when this nervous agent is appropriated exclusively for mental purposes, there is a stoppage of supplies to the organs of digestion, and that their jaded condition results, as a necessary consequence: and it may also be affirmed, that when the stomach is deranged, the brain sympathises through the nervous connection, and is rendered incapable of any sustained mental labour.

Another, and almost an insuperable difficulty exists, to a non-professional reader, from the great complexity of the nervous system. But I have often rendered it less

<sup>\*</sup> Vis nervosa.

so, by comparing it to the spider's web. That the residence of the spider might be regarded as the brain-portion, and all the other parts of this beautiful texture like the nervous fibres reflected over every organ of the body, and which are intimately associated with their structure. That in the instance of the spider's web, it is remarked, that when any foreign substance impinges its delicate fibres (as a fly, for example), a certain vibration is induced, which gives an intimation at head-quarters, and the intruder is punished for the contumacy. So also when anything presses or obstructs any portion of the delicate nervous fibres, a telegraphic communication is transmitted to the brain, and a consciousness of the pain is experienced, although there is not any intimation how it is produced. These electrical communications take place continually, but must not, however, be confounded with the phenomena we shall discuss. But it would be impossible to give in a few pages, more than a mere notion of the practical importance of a knowledge of reflex nervous action.\*

That for instance there are many forms of dental irritation which induce serious disturbance, and much suffering to organs remotely situated. And although these affections are better understood, yet there still exists great obscurity on many of these affections, often producing a vast difficulty in tracing their source. For with all our knowledge, there is sometimes, but "darkness visible," and thus it is imperative on every observer, to cast some little glimmering spark, if in his power, that clearer views may be ultimately obtained.

It is equally a puzzling problem to explain why, when there exists any intensity of pain in any part of the body, no matter what has caused it, the mind is so much engrossed with the one sensation, as to exclude all other impressions from extraneous objects.

<sup>\*</sup> For more profound views on this subject, the works of Dr. Marshall Hall may be consulted.

There is one phenomenon which seems to offer some little, if not a complete solution to the enigma. The especial circumstance to which allusion is made, refers to that morbid intensity of the sense of hearing in the hours of night; when the busy hum of men is hushed, and the prevailing stillness, like the Egyptian darkness, is felt oppressive. For then the sleeping multitude are in a state of semi-death, and the streets like the motion-less charnel-house.

This, it may be said, simply states one of the conditions of single consciousness; the other senses being in a quiescent state, from the absence of their respective stimuli. Hence the acoustic intensity is rendered morbidly sensitive, inducing associations of robbery and murder! And when the busy-waking thoughts are impressed with one allengrossing idea, there seems to be a kind of passive preparation for the supposed exigency. Thus all the nervous power is concentrated in the sense of hearing, and this increases its sensibility verging on disease.

For then every sound or motion occasioned by the body of the listener, is attributed to some lurking demon in human shape. At this stage of the intense excitement, the very breathing, although partially suspended, makes the self-tormentor start as if a pistol had been fired at him, or that a dagger gleamed above his head, ready to be plunged into his heart! So it has appeared when the sufferer from any acute neuralgic affection has his mind engrossed with the one thought. This gives a tendency to aggravate the affection almost beyond endurance.

For when the mind becomes the passive recipient of but one idea, there is evoked every imaginable horror. And the terror thus induced, may, ultimately, consummate the dreaded consequences.

If, for instance, there has been a continual pain in the heart, then the one idea is sudden death. If the limbs are affected, the sufferer sees himself dragging his limbs along as useless appendages. Should the face be the seat of pain, involving occasionally agony in

the eye or ear, nothing but either blindness or deafness haunts his imagination.

It is to avoid such one-sided condition that nervous patients are recommended to travel, and if their malady is the mere result of functional disturbance, change of scene may have some remedial influence. But such is not the case with neuralgic affections, resulting from organic injury, as, for instance, from a diseased condition of the buccal organs;\* and which it is the object of my succeeding letters to explain and illustrate.

I am, &c., J. L. L.

\* The organs in the mouth.

#### LETTER II.

Observations on the discrepant practice in some forms of neuralgic affections.—Remarks on the relation of the masticatory organs with the mucous membranes, with the heart and arteries, and with the brain and spinal nerves.—How to form a correct diagnosis in cases of obscure nervous diseases.—Synthetic inferences.

MY DEAR SIE,—Having with as much brevity as the subject would admit of, given in the preceding letter a few general remarks on nervous affections induced by reflex action, it is now my intention to add some additional information, that the details, subsequently to be treated, may be better understood.

This is important, because when there exists so much obscurity on the source of some painful affection, the very remedies adopted may only tend to aggravate the symptoms, and as a consequence, increase

the intensity of the previous suffering. It is, therefore, from a notion that neuralgic affections are frequently so erratic as to defy anything like a clear *diagnosis*, that it often occurs that persons so afflicted will have recourse to the most discrepant practice, based on contradictory theories; or, as in the case of the charlatan, without any attempt of theory of any kind.

That there are many difficulties in the treatment of these forms of disease, might be inferred from the complexity of the nervous system, on which every part of our elaborate mechanism depends for sensation, motion, and nutrition. It is not surprising, then, that its vital actions may be suspended, or preternaturally increased; or that a very slight cause, such as obstruction or pressure, may interrupt any particular function of some special organ:

Like a watch, its main-spring and chain may be perfect,—its wheels and pinions in their relative position, and yet its motions may be suspended by one of the small vine which affixes the dial plate falling amidst its machinery. So in man, his brain and its membranes, with the spinal nerves, may be in a normal state, and yet some severe pain may exist, of such a distressing kind as to embitter his existence.

In the instance of the watch, the source of the derangement would be found by one acquainted with its mechanism; and, although it is a more difficult effort to find out the loose pin or screw in the human organism, yet if the patient is cross-examined, some clue may be found as to the cause of the disturbance, if it is made by one who has studied the human mechanism, and its conditions, in health and disease.

It is, nevertheless, a matter of every-day experience, that even when this judicious attempt is made with a patient, from the obscurity of the evidence elicited, no clear and practical inference can be formed, and as a consequence, such a person may have to endure extreme misery for years.

But, on the contrary, when there has been

a lucid statement of the first observed symptoms in connection with the health of the individual, so that the particular nervous affection may, or may not be considered as induced by such a condition, but as merely coincident with it, yet some data may be obtained for discrimination and reflection, and an inference may be formed that the brain and the organs of nervous life are not the offenders, but that there exists a probability that the delinquent may prove to be some dark, carious, and ugly-looking teeth, or deeply imbedded stumps, which, after all, may be found to have induced all the annoyance.

For the presumptive evidence in such a case arises from the fact, that when the brain is well-formed, and also the spine, that the mouth may be the seat of the neuralgic disturbance. For it should be remembered, that the masticatory instruments, besides their mechanical importance for cutting, dividing, and grinding food, prior to its admission into the stomach, have a direct

and indirect connection with all the great vital organs, and thus have an actual relation with the general economy. They hold, for example, an intimate sympathy with the mucous membranes, by a tenure inherited at the very germ of their existence;\* with the heart and vascular system; the with the brain and the external senses; and with the spinal nerves, from an intimate union of their nervous fibres with the latter.

Many, therefore, of the most anomalous forms of nervous diseases may be traced to dental irritation, either idiopathically (as in common toothache), or from sympathetic influence on the mucous, the vascular, and the nervous centres.

The class of nervous diseases which will shortly engage our attention being induced

<sup>\*</sup> Mucous follicles.

<sup>†</sup> From the teeth being supplied with blood by the external carotid arteries.

<sup>‡</sup> By the dental nerves originating at the base of the brain.

by dental irritation, a few words may be important on the diseased conditions of the masticatory organs, which induce the various and painful states of others, and which are thus in consequence implicated.

These predisposing sources of agony may originate during the progress of the destruction of the osseous portion; or when an enlargement takes place in the fangs; or from a general inflammatory state of the body, which may cause a more active circulation in them; or from the injurious habit of smoking, which by keeping up an unnatural temperature, tends to destroy the periosteum of the fangs; or from foreign growths in the sockets; or when the nervovascular pulp is inflamed. Although in many instances the pain may be confined to the mouth, yet in numerous others there is besides suffering in remote organs: and it sometimes occurs that the latter is the case, even when there is an unconsciousness of pain, in the actual locality where the destructive agency exists.

From many careful experiments it would seem, that all organic changes are preceded by some irregularity in the circulation, and which appears to result from some abnormal condition of the nervous system.

If like causes produce like effects, it may be asked, why are not then the results uniform, when there exists the same diseased conditions? The answer seems to be furnished by the phenomena which are observed to take place during the first dentition, when it is noticed that in some instances. it is the mucous membranes which suffer from the irritation. It is noted that in after life, when there exists any disease in these same organs, the mucous surfaces are sure to be sympathetically affected. If, on the contrary, there is observed much inflammatory disturbance during teething, whenever any destructive action in these organs is set up, a similar condition of the bodily state is sure to result. There is the quickened pulse, fevered breath, throbbing temples, and so forth. But should an infant

suffer at this same period with convulsive fits, or from other forms of nervous disease (involving the brain and spinal nerves), when under any of the forms of dental disease, there is predisposed at the same time some nervous disturbance.

Nor must we omit to notice, that these predispositions to be differently affected, may result from hereditary tendencies; that is when there is inherited, either a weak brain, or spinal cord, or lungs, heart, stomach, and so forth.

Hence during dentition, if there are any symptoms manifested of derangement in any of the important organs previously noticed, these disturbed conditions should be regarded as admonitory warnings, to induce attention, so that any permanent injury in them might be obviated. Yet even with all possible care, there is not invariably an impunity from subsequent morbid consequences. Nor ought it to surprise us that the dental organs, which are so intimately connected with the great sources of vital

power, should during their periods of derangement and death, induce so many anomalous and painful affections as we shall ultimately mention.

Health depends on a harmony in the working of the organic machinery; there is, therefore, some reason to deprecate the great neglect hitherto shown to the apparatus of the mouth, which is often the sole cause of local and general derangement of the system.

When, therefore, there is any painful nervous affection, and it is ascertained that the brain is well formed, that the spine is symmetrical, and that the organs of digestion perform their usual functions, then it is a fair presumption to regard the predisposing cause as existing in the mouth. And it will be found, under such circumstances, that the source of disturbance may be induced by diseased fangs, or bony tumours on them;\* or an enlargement at their extremities; † or

<sup>\*</sup> Exostoses.

<sup>†</sup> Polypus.

from unnatural pressure against the glenoid cavities in the upper, or on the coronoid processes of the lower jaw. Or there may be bony tumours either within or on the surface of the sockets. Sometimes the most painful affections are occasioned by dead stumps. But in all these cases a practised eye can detect the source. And this is important when some of them induce extensive local inflammation, involving the glands, tongue, palate, tonsils, &c. Often the mucous and vascular systems are implicated; and under some circumstances, the nervous system and brain are much affected.

Other conditions may be incidentally noted. Thus during feetal gestation there is often manifested a more active circulation, and great irritation of the nervous system;\* often in their turn inducing active inflam-

<sup>\*</sup> In pregnancy these disturbing influences are continuous, and there is an exaltation of some special organs, sometimes confined to morbid conditions of the senses of taste and smell.

mation of the mouth generally, and the teeth in particular, frequently causing some of them to become carious.

It is also a matter patent to every observer, that in persons of a highly nervous temperament who indulge to excess in alcoholic stimuli, there is induced an increased circulation in the dental organs, which, if persisted in, causes their certain destruction.

These general remarks demonstrate that the teeth may derange other parts of the organism, and that undue action in remote organs may injure and destroy them.

There is one more fact connected with these preliminary statements, which is worthy of our consideration, namely,—that the majority of deaf mutes have been made so during the first dentition, whilst the formative process is active; that then these organs have great vascularity; and often all the neighbouring parts become inflamed and thickened. Thus there is often a great enlargement of the fauces, which, from their

increased size, press on the eustachian tubes,\* the inflammation extending to them; and then their inner surfaces also thicken, producing temporary deafness as a result.

But the incapacity of the child to take cognizance of sound is not regarded as accidental; its dulness is pronounced to be congenital deafness, and there is not any attempt made to teach it verbal sounds. And prior to the existence of the excellent institutions for educating the deaf and dumb, such beings were deprived of all interchange of thought, and consequently were left without the highest privileges of human existence.

I am, &c., J. L. L.

<sup>\*</sup> The eustachian tubes are the means of connecting the organ of hearing with the mouth.

#### LETTER III.

Causes of sympathy of the stomach and alimentary canal from diseased teeth, and the reverse order of the phenomena; illustrated with very important cases.

MY DEAR SIE,—Having shown in the preceding letters some of the effects of dental irritation on the *buccal* cavity, it follows in the natural order of our subject, that some few remarks should be given on the same disturbing agency on the mucous surfaces generally, from the mouth through the whole alimentary canal.

That this is essential, may be inferred from the fact, that the rudimentary germs of the teeth are formed of sac-like portions, or mucous follicles. And it is a common symptom, during their development, that there is often induced extensive irritation of the stomach and bowels:\* and in adults, when the teeth are affected with chronic inflammation, there is often extreme gastric disturbance. And this is induced, by what is called, transposition;† that is, from the mucous lining of the alimentary canal being a continuous surface, irritation at one part may involve any other; and this same law explains why foreign substances impacted in the intestines, as in chronic constipation, often induce a severe attack of toothache. This knowledge also furnishes a reason why dead fangs injure the mucous membranes of the mouth.

So that whilst we shall in our subsequent communications explain how nervous irritation is directly transmitted, by reflex nervous action to distantly situated organs, having some nervous connection. So also we are furnished with a *rationale* of the above phenomena, by comprehending the important law of transmission, which may occur in any

<sup>\*</sup> Diarrhœa. † Metastases.

continuous surface, when that surface is composed of one kind of tissue.

We shall now cite a few cases, as evidence to substantiate the correctness of these views.\*

A gentleman who had a strong constitution and robust health, but which was prematurely injured, came to consult me, and furnished the history of his case to this effect. From his wealth and position he had led a life of gaiety, either having dinner parties at his own house, or dining with his friends, and consequently keeping up a constant state of excitement; as this occurred at a period when there was not permitted any free agency to a man as to the quantity of wine he should drink. For it was considered high treason against the host, if any one shirked the bottle. And it thus became the custom for every guest to prove his fealty

<sup>\*</sup> In a future letter will be discussed, the effects of a chronic disturbance of the mucous surface of the atomach, &c, as often the cause of serious functional disturbance of the brain.

"to the lord of the feast," to drink deep, and steep his senses in forgetfulness!

The high feeding and excessive stimulation produced at length many serious consequences. The stomach became irritable, and recourse was had to brandy and bitters, to lull its refractory tendency, and to stimulate its overtaxed and jaded powers. This treatment was little calculated to remedy the evil. He did not, however, lessen his daily potations, although painful symptoms forewarned him of the misery likely to result. For the virulent effect on the mucous surface of the stomach became more obvious in the ratio of his incapacity to take food, and then this outrage produced severe punishment. The mouth suffered greatly. and was so sore and tender, as to make him shrink from anything coming in contact with it. And when he meditated a reform, he had not sufficient strength of mind to realise it, not being able to stand the laugh and jeers of his friends!

Soon he experienced an obtuse pain in the

jaws, with occasional shivering, and throbbing in the sockets. He became fretful and irritable. There was some temporary relief, as matter was formed in the *alveoli.*\* At length, in a fit of desperation, he had most of the teeth extracted.

He was recommended some simple nutritious diet; and urged to avoid the use of wines and spirits, as they acted on the inflamed mucous surfaces as positive poisons. Poor fellow! he promised to act on this advice, but he had not the moral courage to bear the temporary depression, and he continued his bibulous habits. The former attack was renewed with greater virulence, and the matter was more offensive even to himself, and then he had the remaining teeth extracted. But he was prostrated in strength—a mere wreck of a man.

This case furnishes data that a diseased condition of the mucous surfaces, will, by

<sup>\*</sup> Alveoli, the sockets in which the teeth are fixed.

transposition, become the source of injury and of death of the dental organs.

The following case is an example of the reversed process in the order of these phenomena:

A lady suffered from almost continued pain in her mouth, and at the same time her health was very bad. When I saw her, one of the submaxillary glands had suppurated, and a lower molar was extracted. though she had less pain, and the gland healed, yet her health continued rather to get worse than better. This appeared to result either from a want of stamina, or else from some subtle poison which lurked in her system, and was gradually sapping the very foundation of her existence. She looked pallid and emaciated. Her expression gave a notion that she was constantly affected with nausea, or that she experienced something like a continued fætor under the nose. Then her eyes, which were naturally good, had lost their animation. She spoke in a drawling and affected manner. This did not seem to be habitual to her, but from the unpleasant sensation which annoyed her: and, as I afterwards learned, there was imparted a sickening taste to everything she attempted to eat.

Many experiments were empirically tried, but they proved altogether useless, and only tended to render still greater the depression she experienced.

One day, at her request, I examined her mouth. The front teeth were very dark, the dentine being completely destroyed, and there was not any vitality in them. They had evidently been injured by a blow or fall: and on mentioning my conjecture, the lady stated that she struck her mouth against a door about two years before, with such violence as to loosen the teeth, and cause her lip to be very much swollen, attended with a throbbing sensation. That nothing had been done to them, because she did not experience any actual pain. Yet she had observed that they gradually blackened, and that after a time, matter cozed from the sockets, and

that it was this discharge that made her sick, from its disagreeable taste.

It appeared then certain, that the mere fact of pus passing, under these circumstances, into the stomach, could not alone induce the irritable state of the mucous surfaces; as the matter, when it mixes with the gastric juice, would become tasteless, if not altogether harmless, from the antiseptic quality of the latter fluid.

It was therefore my firm opinion, that as the teeth were merely extraneous bodies, and that the irritation they occasioned to the mucous surfaces of the mouth had been transmitted to the stomach; which had, in consequence of some previous abnormal condition of it, been rendered morbidly affected. At my suggestion these offending bodies were removed, and she rapidly recovered, actually metamorphosed into a beautiful and healthy woman. All her friends marvelled at this result, as it had never entered their minds that so much indisposition and constitutional disturbance should be induced by a cause so apparently insignificant.

I am tempted to submit another example, as it furnishes still more convincing proof of the action and reaction which takes place between organs remotely situated from each other.

A fine youth, when about the age of fifteen, was playing a game of cricket, when he was struck by a ball on the front teeth, which gave him very uneasy sensations, particularly in the upper lip. This condition was superseded by an intense pain in the four front teeth, which on being touched seemed so loose that in speaking they moved inwards and outwards: and, for a time, their sensitiveness increased to such a degree, that the movement of the lips caused him the greatest agony. He mentioned these symptoms to the master of the boarding school at which he had been placed, and was recommended by him not to heed the temporary inconvenience, as he would be better in a few days.

The pain, after a few weeks, suddenly ceased, but his health became seriously affected. His appetite failed. And some-

times he had altogether a disgust for food, or else there existed an inordinate craving for it. But whether he ate little or much, the stomach was so much deranged, as to reject everything; even the very medicines prescribed to alleviate its painful condition. Ultimately he became so weak and emaciated that the physician suspected another cause, but particularly urged that I should be consulted.

I made a general examination of his bodily structure, and then looked into the mouth. The four front teeth were broken obliquely, but the crowns still remained in situ, but on removing them, the fangs were perceived to be black and dead:\* and on the latter being touched the matter oozed from all around them, and the patient complained of its disagreeable and disgusting taste. The offending roots were extracted without much pain, as they had been dislocated at the time the teeth were struck, and hence formed no part of the living organism.

<sup>\*</sup> A state of necrosis.

The change in his health was comparatively rapid, as soon as he recovered a healthy appetite, he gradually gained strength, and in a very few months became quite robust, and much stronger than he had been before the accident occurred.

This case furnishes another most important fact—that injury of the dental organs often induces serious disturbance to the mucous membranes, when there is a predisposition.\*

Lastly, as corroborative evidence that any foreign substance impacted in any part of the alimentary canal, will often induce affections of the teeth, by a transposition of the irritating effect, caused on the mucous surface in which indurated matter is in contact.

We cite the following from a vast number of similar facts. A very fine woman, with a florid complexion, and strong well-built frame, wished, as she was in great agony, to

<sup>\*</sup> We shall find as we proceed, that precisely under similar circumstances, in some cases, the nervous system may manifest as strong disturbance as in this case affected the stomach.

have a number of her teeth extracted. On examination, they were perceived to be beautiful in colour, well covered with enamel, and without either speck or blemish. Her breath had a rather feverish smell, and the tongue indicated a chronic constipated state of the bowels. She was, therefore, told that it would be a most criminal act in any one who should extract them. She was advised to go to her own medical man, and say that she was told that she required "a cathartic dose." At first she was very angry that her wishes were unheeded, but on being told that if anyone would be so dishonest and manifest such an absence of all professional information, for "a base bribe," that she would then find that the remaining teeth would be liable to suffer in a similar manner. as the cause of her agony would not be removed.

She had the sense to recognise the accuracy of my opinion and to act upon it. For a very few days afterwards, she enclosed a most liberal fee. And what was still more satisfactory, there was a note with it, breathing her gratitude "as she had experienced the soundness of my judgment, and had in consequence saved her teeth, and had besides a perfect immunity from pain." It is said, that "a knowledge of a disease is half the cure," it is surely more so when there is practical information with sound theory, for then we may ensure a perfect one.

I am, &c., J. L. L.

## LETTER IV.

General observations of the fifth pair of nerves; their origin at the base of the brain; their forming the nervous connection with the eyes, ears, nostrils, glands, tongue, fauces, teeth, &c.—The practical advantage of this knowledge shown in many interesting cases.

MY DEAR SIR,—With the view of rendering this and my subsequent communications of some practical value, it is essential to speak of the origin and distribution of the fifth pair of nerves, the fibres of which are sent to the face, to the eyes, ears, tongue, palate, glands, teeth, and fauces; and, also, to the muscles in the locality of the mouth. We may note, that the fifth pair of nerves originate at the base of the brain; and by means of certain fibres, they are also connected with the nerves of motion and sensation (spinal column), and this know-

ledge renders it very easy of comprehension, why disturbance in the organs of the mouth may induce such extensive agony to distant organs.

We therefore direct attention to the subjoined note.\*

\* The fifth pair of nerves are situated at the base of the brain, and they are often called *tri-facial* nerves. In their anatomical character they resemble the spinal nerves, having a double origin, and, from certain phenomena, seem also to have a double function, as they are essentially *sentient* and *motor* nerves.

As these nerves, like the nerves of sight, hearing, &c., are double, we shall for clearer description speak only of one of them. The trunk of the fifth nerve separates into three portions, called the ophthalmic, the superior maxillary, and the inferior maxillary nerves. The two first-mentioned are formed principally from the large root at its origin, but the fibres of the smaller root are proved by dissection to be connected merely with the inferior maxillary branch. These views are in accordance with many eminent anatomists.

It is also rendered obvious by dissection and experiments, that the first and second divisions proceed almost entirely to the skin and mucous surfaces; whilst a small proportion of their fibres are lost in the muscles. The *ophthalmic* furnishes fibrils to the membrane that lines the eyelids and forehead; a portion of

This explanation of the distribution of the fifth pair of nerves will account for the common sympathy which exists between the organs of mastication, insalivation, and deglutition; and with the organs of digestion

it is also connected with the nostrils, the lachrymal sac, &c.

The superior maxillary nerve is much larger than the latter, and it supplies the palate, the septum and side of the nose, the eustachian tube, and the soft palate; whilst some of its fibres pass round the upper jaw, and vanish in the cheek. Some filaments supply the bone forming the jaw, and the hollow cavity in the cheek on each side of the nose called the ANTRUM; also the grinding, cutting, and tearing teeth, the cheek, eyelids, and upper jaw.

The inferior maxillary nerve supplies all the parts belonging to the lower jaw and muscles (the masseter, pterygoideus, and buccinator), and two branches of the inner part of the temporal muscle. Some filaments supply the fore part of the ear, and after accompanying the temporal artery, seem to terminate.

A portion of the nerve supplies the sublingual gland, and also those connected with the muscles o the tongue; whilst a twig of the superior maxillary nerve forms a connection with the apparatus of the inner ear (the chorda tympani), by another portion lodged in the groove of the lower jaw; it supplies the submaxillary glands, and then its main trunk is con-

and assimilation. And from its origin with the seat of thought, the vocal organs, and the various parts of the face, it may be said to be the medium for expressing every emotion and feeling of the mind.

And this exquisite nervous mechanical arrangement furnishes a solution to what would otherwise seem to be a very difficult problem. By its means we may now distinguish many forms of obscure nervous diseases, of which we have many premonitory symptoms, if we observe and rightly interpret the phenomena of the first and second dentition. For example, diarrhœa, fevers, inflammation of the eyes, ears, glands, &c.; also loss of consciousness and fits; spasms, and other agonizing pains in various parts of the body.

ducted along a canal into the sockets, where it is distributed in filaments to the different teeth; whilst its remaining filaments are intimately connected with the lower lip and chin.

The fifth pair of nerves, therefore, besides furnishing these connecting media of sensation, is in actual union with the brain, the spinal nerves, the lungs, heart, &c.

We have already alluded (Letter II) to the intimate connection of the teeth with the mucous membranes, and will merely, in this place, particularise some of the special parts, such as the lining of the mouth, the throat and windpipe, in order to render it obvious that there is a special connection with the stomach and lungs; whilst the connection of the apparatus of the mouth with the heart is rendered equally certain by the fact, that the blood-vessels, the superior and inferior dental arteries, are derived from the external carotid arteries. It is by such a general view of the nervous, the vascular, and mucous connection, between all the various vital organs, that we can comprehend and explain why diseases are rendered so complicated.

But what is still more to our present purpose, we can cite from a mass of evidence from our own and others' experience, to prove that often one organ may be affected, from a diseased condition of another, without any consciousness that such is the fact, so far as it depends on the experience of the feelings of the sufferer himself, who is rarely cognizant of the fact.

The following is selected as an instance of the correctness of the views enunciated. And a preference is given to it (although we have notes of many similarly affected) in order to show the enduring and forbearing nature of women, and the brutalizing tendency of strong drinks, when indulged in to excess, by some of the so-called "Lords of the Creation."

A tall, thin, genteel-looking woman, with a fair complexion, and debilitated aspect, was sent to me with her eyelids paralysed. And in the note she brought, I was requested to ascertain if the cause of the affection was in the mouth. The poor woman had not the slightest volition over one of the eyelids, and but very little over the other. On being asked how long she had suffered, and to what she herself referred the painful and annoying circumstance, she replied with great agitation, saying "that she attributed it to her drunken husband, as he was in the

constant habit of nipping the upper part of her nose whenever he was intoxicated. And this he did with a fiend's malignity. For he waited until they were both in bed, and then he seized her, firmly, to inflict the torture, knowing, from her strong maternal feeling, that she would not dare to make a noise lest she might awake her poor little children, who slept in the same room!"

She added, that in consequence of this cowardly and inhuman treatment, she had suffered great pain, and only found relief in copious tears. There is not a doubt but that this unmanly conduct had a tendency to weaken the eyelids, and under dental irritation they had lost all nervous power, and hence their incapacity to act. But on removing the immediate disturbing cause, she recovered perfect volition over both eyelids before she left my consulting room.

There are other organs of sense often affected through their nervous connection, and are thus forced to pay a penalty for this

very intimacy. Thus there are often agonizing pains in the ear from its proximity to some diseased organs in the dental cavity.

And yet when there exists a correct knowledge of the complex nervous arrangement, there is not so great a difficulty in forming a correct diagnosis as there might seem to be. For with accurate information on this subject, a distinction can be made between the different symptoms, whether the suffering is the result of reflex nervous action (popularly called sympathy), from some diseased tooth, or some morbid affection of the auditory nerve itself, or from inflammation in the passages of the acoustic apparatus.

A small, delicate young lady, about nineteen years old, had often been inconvenienced from her jaws being contracted, and the front teeth being pushed forward, out of the natural curve. Occasionally suffering pain in her mouth.

After a time, it was observed that she gradually became dull of hearing, and her expression, which had hitherto been full of

vivacity, presented an unpleasant vacancy, which was obvious to every one.

It was hoped that this might be but a temporary result of a cold, but this anticipation proved fallacious. For after the lapse of a few months, her deafness became so great, that she made the most ridiculous replies to ordinary questions. Her parents became alarmed, and consulted an eminent aurist, but without the slightest advantage.

She did not complain of any constant pain in the ear, but that occasionally she experienced shocks in quick succession, which though brief, induced for the time so much agony, that had these sensations been continuous, she would have lost her senses.

As almost a forlorn hope, she was brought to my consulting room, and on examining her mouth, there was presumptive evidence, that the acoustic defect originated within this cavity, and that it was occasioned by unnatural pressure against the glenoid cavities. This condition being remedied, she recovered her hearing in a few days.

We may incidentally remark, that in cases of deafness, it is possible without the use of any instrument, to ascertain by a simple experiment, whether the defective hearing results from local irritation affecting the eustachian tubes, or the other auditory passages: or whether the auditory nerve itself is the cause.

It may often occur that when deafness is occasioned by local irritation, that loss of hearing may become a permanent infirmity. For, in such cases, there is a chronic form of inflammation in the auditory passages, precisely producing a similar effect on the adult, as that which is observed to take place in the deafness induced by the first dentition.

By ascertaining the predisposing cause, this acoustic obtuseness may be but temporary, and the normal function of hearing be restored.

We cannot attempt to give any very profound views in this mere sketch, we shall merely content ourselves with submitting a few facts to illustrate some of the phenomenaof dental irritation as connected with nervous life, and give them in the best order of which the subject will admit.

Thus with sympathetic deafness, may be ranged glandular disturbance, itself often a cause of the first-named affection, whilst the glands themselves may suffer extensive disease, from irritation in the buccal cavity.

This is not announced as a novel doctrine, for the fact itself is attested by the most indubitable evidence; but the views are submitted to show the constancy of effects from the same disturbing causes, and that we have by repeated observations arrived at the important knowledge, that whatever may be the source of morbid irritation, that the weakest organs are sure to be involved.

A fair-faced boy, of about eight years old, with very blue eyes, and a nervo-lymphatic temperament, suffered from extensive glandular swellings, which had suppurated, and discharged daily a large quantity of matter, which, with some few unpleasant additional *items*, so injured his health, that he was con-

sidered to be in a delicate and precarious state; and his hearing became obtuse. The fauces were swollen, and affected his swallowing even liquids without some effort.

Various experiments were tried to reduce the size of these unseemly glandular appendages. They were painted with *iodine*, and this preparation was administered internally, but without any actual advantage.

He was ultimately recommended sea-air, and took cod-liver oil, but the suppuration continued unabated, and the glands increased to such an extraordinary size, as to have to be supported by a broad band, brought over his head. But whenever he moved his head or his jaws, the matter flowed so copiously as to saturate in a very short time the bandage, and aggravated the annoying circumstance by its most offensive effluvium.

When brought for my opinion, he was pallid, his flesh very soft and flabby, and his general stamina too much lowered from this constant drain on his system. His eyes were extremely dull and listless, and his

hearing so defective, that he might have been taken for one with connate deafness. There was such an absence of all animation, that he seemed either deficient in mental capacity, or too much debilitated to give any attention when addressed.

The gentleman who came with him, told me, that his mouth was very sore, and very painful, and that it was impossible for him to masticate even the softest kinds of food. But he insisted that this was occasioned by the odour of the discharge, which so disgusted him, that he suffered from constant nausea.

In the buccal cavity there was sufficient evidence for much of this annoyance. The gums, lining of the cheeks, tongue, palate, fauces, &c., presented one extensive inflammatory surface. But on the right side, where the glands were the worst, the mouth had a livid appearance, and the fetor was indeed so foul as to induce us to exclaim mentally:—

<sup>&</sup>quot;O for an ounce of civet to sweeten Our imagination."

The putrid particles and thickened saliva, mixed with the food, and were not likely to improve its flavour.

A minute examination with the finger rendered it evident that there were below the mound of vascular and livid gums, some loose teeth: and these concealed sources of misery and disease, were aggravating all the existing bad symptoms. On their removal, he lost a rather considerable quantity of blood, which enabled me to ascertain that the inflammatory action had destroyed, by absorption, all the sockets of both the temporary and permanent teeth. And there is little doubt, had he continued to suffer from the same cause, the substance of the jaw would have been gradually involved by the active absorption.

The next day, although the poor little fellow suffered from indisposition, yet there was more brightness about his eyes—his hearing was better, and for the first time of our acquaintance, I could approach him without a sense of disgust.

The submaxillary glands gradually decreased, and there was a cessation of the mattery discharge. His mouth healed, and his health so far recovered, that he became as lively and playful as most boys of his age.

It will be evident that, whatever apparent obscurity existed in the first instance, the history of the case furnishes incontrovertible evidence that the dental organs were the source of all the mischief. The absorption of the alveoli, from the teeth being merely extraneous bodies, are proofs that extensive inflammation had existed; and that the glands, from his scrofulous tendency, being the weakest organs, were the first that were implicated.

In the list of anomalous affections from dental irritation, which possess a peculiar interest, may be mentioned the following. A child, the daughter of a learned professor, whilst cutting the temporary molars, was observed to swallow food with great difficulty, appearing so much affected, as if in the act of

choking: whilst in swallowing fluids (partly an act of volition), the phenomena were still more remarkable. For after she had attempted to drink, it was returned in jets, as if spasmodically rejected. As she was the only child, her defective swallow excited the greatest alarm in her parents. She was brought to me, and the previous incidents narrated, with many dark presages as to the consequences. But after explaining the inflammatory condition from dental irritation, their confidence reassured them, that the affection was curable, and that therefore the evil was but temporary. And after a very slight operation the delighted parents were gratified, as there were not any repetitions of the choking sensations.

Among the variety in the forms and localities of the nervous affections immediately connected with the fifth pair of nerves, may be mentioned tic douloureux, which usually affects the nerves of the face; or it is confined to some particular spot, such as the forehead, temples, jaws, chin,

and lips, in which there is concentrated the most insufferable agony.

When the affection is confined to one side of the face and head, it is called "hemicrania." This latter affection we shall subsequently notice, we merely allude to it now, to state that even when tic douloureux is felt on one side of the face, there is no calculating its subsequent erratic and capricious movements. A patient may for some time complain of one painful spot, and it may shift itself, and be transferred to the eye-ball, inducing, even for a second, such intense agony, that the sufferer turns pale. And it may occur, whilst narrating these facts, that the pain is transferred to the ear, &c.

Thus we may distinguish tic douloureux from hemicrania; the first is confined to the facial nerves and the connecting branches; the second is dependent on sources of irritation, either in the brain itself, or in the mouth.

There is one example which will present this painful affection in a more correct manner, than any verbal description, however graphic.

A thin, restless, and highly sensitive lady, who, after enduring months of extreme misery, with little intermission night or day, came to consult me, declaring that her existence had become burdensome.

When the attacks came on, she only wondered that she had retained her senses. For even during the intervals, she was in a constant state of dread from the suspense as to how soon she should suffer from another paroxysm. This vigilance was in itself a species of agony.

Just at the time she was giving the history of her malady, she suddenly stopped, her features quivered, and there was a convulsive movement in the ball of the eye, causing a copious flow of tears to course down her cheeks. She looked very pale, and so much agitated, that she appeared like one terrorstricken. Big drops of cold perspiration bedewed her forehead, and at intervals she groaned most piteously, and then put her

hand at the side of the ear, to which organ the pain had been transferred, and then her expression had all the wildness of hopeless despair!

The twitchings of her face increased with greater rapidity, and she excited my deepest sympathy and commiseration.

Having discovered that some deeply-seated stumps were highly sensitive to the touch of a pointed instrument, and that there also existed much local inflammation. I urged the removal of these diseased fangs, even should she suffer by doing so excruciating pain. There was one certainty, it would be but for a brief period, and it was most likely that the nervous irritation in her face, eye, and ear, would cease altogether. She submitted, and scarcely had the operation taken place, than her expression became more calm and natural, and in a few weeks she recovered her usual state of health.

Similar disturbance may result at any portion of the widely distributed fibres of the fifth pair of nerves and their connections. Sometimes, the pain in the face may be

suddenly transferred to the spine, limbs, and collar bone. Thus tic douloureux shifts from one locality to another, its movements resembling the electric fluid, so rapid are these changes.\*

Among the painful affections which could be classed under the genus tic douloureux, there is one species, induced by an enlargement of the nasal sinus which connects the nose with the antrum, as in the following instance:

Mr. W—, a man of sedentary habits, being devoted to literary pursuits, had long been a martyr to the most fearful suffering in his face and nose.

When he consulted me, he was in a state of great excitement, particularly when he described his symptoms, which in substance was to this effect.

That the pain would suddenly and un-

<sup>\*</sup> All neuralgic pains might be called tic-douloureux; but these terms are used to express those painful affections as the one mentioned above, when the nervous disturbance originates in the facial nerves.

expectedly steal into his mouth, and seemed to pass up through a hollow tooth in the upper jaw and rush to the nose, and then it passed away suddenly. For a brief period there was a cessation. But the moment he opened his lips, either to speak or to eat, the same malignant demon appeared to crawl into one of his grinders, tearing it away with pincers, until it got out again into his face, and then it savagely produced an inexpressible agony at the side of the nose!

A careful examination of his mouth rendered it obvious that it contained a magazine of morbid materials. The teeth were encased in an armour of dark yellowish hard salivary calculus, which had mechanically forced the gums from the sockets. On the affected side there were numerous stumps in the lower jaw, and some black-looking molars in the upper jaw. Some of the latter were the very picture of desolation. They were crownless and excavated, resembling the walls of a gutted house. I recommended their extraction, but he pleaded hard that an

attempt should be made to give him some relief without the necessity of this horrid alternative. After the extraneous deposit was removed, and other remedial means used, which were deemed essential, he became better.

It was some days before herenewed his visit, and then he reported that he was free from pain. He continued so until the temperature of the atmosphere was suddenly lowered from the very heavy rain, and strong, north-easterly wind.\* When he came to tell me of this relapse he looked wild, with a flushed face, a full pulse, and a most feverish breath. He walked up and down, evidently very much agitated, and his dark eyes had a maniac's brightness, and at length, having worked himself up into a state of desperation, he raved rather than spoke,—"The demons are at their work again, take out the teeth!"

\* This occurred in the month of June, 1852, when it rained incessantly for a considerable time. The days were dark, cold, and windy, and everybody had fires; and even then one was impressed that it was early in the month of March.

After the operation, I made a particular examination of the second molar, the fangs of which had penetrated into the antrum, and one of them was hollow throughout, as if it had been excavated by some mechanical process. So that there was a free passage from the nose to the antrum, and from the latter through the tubular root into the mouth. Therefore a stream of inspired air could easily pass through the pulp-cavity, from thence to the hollow cavity in the cheek (antrum), and out from it into the nostril through the nasal sinus. So that a constant inflammatory condition was kept up, and the nervous fibres became implicated -hence the agony he had endured.

He adopted a simple dietary treatment, and used other means of healthy occupation, differing from his ordinary habits, and very soon recovered.

In other cases of diseases of the antrum arising from dental irritation, the sinus which connects it with the nose is very often obliterated. But in the instance of Mr. W—,

the lining of the nose was highly inflamed, and the sinus was enlarged. This is not a mere presumption. For when a current of cold air was inspired, there was not any perceptible change of temperature after it had passed through the cheek-cavity (antrum) and when it issued out of the nostril.\*

When, however, there is set up an inflammatory action in the antrum, arising from dead teeth, the lining of this cheekcavity becomes thickened, and the nasal sinus, which connects it with the nose, becomes either temporarily or permanently obliterated; so that in point of fact, the latter ceases to be a medium of communica-

\* That this is not a solitary instance, from the same kind of dental irritation, I may mention the case of an old gentleman at Birmingham, recommended to me by the gifted Joseph Hodgson, Esq., the eminent consulting surgeon. There was an opening at the base of the antrum in the mouth, and also an enlargement of the nasal sinus, which induced some very disagreeable consequences. For whenever the sufferer attempted to swallow fluids, they passed through the cheek-cavity and out at the nose.

tion between the two cavities, and the consequence is, that matter is formed in the cheek-cavity. The pain in the latter case is dull and throbbing, whilst in the one we have narrated the patient suffered such exquisite and lancinating pains, as to resemble the worst species of tic douloureux. And our view of the case was confirmed by the experience of Mr. W-, as he distinctly remembered that when he closed the lips to avoid the pain of inspiring cold air, he found that the same agony resulted when he drew the air into the nostril. So that in either case there circulated a free current of air. and the degree of suffering was in the exact ratio of its temperature.

I am, sir, Yours, &c., J. L. L.

## LETTER V.

Remarks on dental irritation as affecting, under some circumstances, the muscles of the face and neck, inducing convulsive action, and in other instances, paralysis and catalepsy.

Some observations on simulated affections, resembling hysteria, epilepsy, nemicrania, and temporary insanity.—How these states are to be distinguished from similar affections induced by injuries of the brain, either functional or organic.

MY DEAR SIB,—It may be more in accordance with the phenomena to which we have already alluded, to offer a few remarks on some curious cases of muscular disturbance from similar sources.

As an instance of partial paralysis of the muscles on one side of the body, we cite the case of Miss P—, it being of especial interest, from all the circumstances connected with it, as it impresses the important fact, that when forming a diagnosis, all phenomena

should be carefully examined. For Nature is, after all, our best instructress!

This young lady was about fourteen years old when I first saw her. One side of her face was much distorted and swollen, and the arm on the same side partially paralysed. There were three large scars under the lower jaw, which appeared like the *cicatrices* resulting from scrofulous wounds. I was informed that portions of bone had exfoliated, and that the submaxillary glands had suppurated, and had been repeatedly lanced.

There was not any scrofulous diathesis, yet the organs already mentioned had suffered from active disease in them, arising evidently from some local irritation.

She was well formed, and had always had most excellent health, until the time that the glands were observed to be hard and inflamed.

With these data, I made a careful examination of the mouth, and observed at the extreme angle of the lower jaw, that there was a round bony excrescence im-

bedded deeply at the side of the temporal muscle, near its attachment to the coronoid process. And on removing it, this foreign body proved to be a temporary molar, with the fangs absorbed, excepting a sharp edge all around the base of the crown. It was, therefore, evident that all the injury had resulted from this tooth having acted as an extraneous body, whilst the inflammatory action had been aggravated from the sharp knife-like edge of the impacted substance.

The correctness of this reasoning was demonstrated by the rapid restoration of the patient's health.

Another example I am induced to give, as it is too important to be omitted.

Miss W—, a young lady, with a goodformed brain and normal spine, had gradually lost the use of her limbs. And when she was moved from place to place, her legs trailed on the ground as useless appendages; and when either of the arms were raised, it fell down powerless and motionless.

She was in this condition when I saw her;

and on a minute examination, it was my firm conviction that all this loss of muscular power resulted from an inflamed tooth in the angle of the lower jaw, which had involved the spinal nerves. By my urgent advice the offending tooth was extracted, and the correctness of my diagnosis was soon rendered evident.

About a fortnight after the operation I accompanied her physician to pay her a visit. We found her writing a letter; so that the muscles of her hand and arm had recovered their normal functions. But as her family removed shortly after this to another locality, it is not in my power to report on the ultimate restoration of the functions of her lower extremities, although, from other instances in my practice, I have not a doubt of her having done so.\*

There are other cases of the kind I could narrate, as being equally satisfactory. The following example is worthy of great con-

\* This is a most instructive case of reflex nervous action, through a portion of the cervico-facial nerve.

sideration, as furnishing important matter for reflection, and as indicating the advantage of not regarding any peculiar nervous disturbance as depending solely on some lesion in the part affected. Its history is both curious and interesting.

A lady, who had for many years been engaged as a teacher in a noble family, had suffered, among other penalties of her overtaxed energies, the annoyance of a mouth filled with carious teeth. But, although she had almost incessant pain from them, she bore the infliction with a stoic's fortitude. But a circumstance occurred, subsequently, which induced her to retire from her professional avocations. She suddenly became affected in a most strange and novel manner: the circumstances connected with it we shall now briefly narrate.

We must premise the history of this case by stating that she had had an immunity from pain in the diseased dental organs, but upon the slightest excitement, the muscles of her face began to move with the most violent twitchings, and the accumulated nervous power seemed to take the direction of her neck; and then, whatever might be her occupation, whether reading or conversing, her attention became suddenly suspended, in consequence of violent convulsive movements involving instantaneously the muscles on one side of her neck,\* giving her head a sudden and violent turn half round, just like when any one attempts to look at an object over his shoulder without moving the body.

And it may be supposed how greatly annoying this must have been to a stately and well-behaved lady, not to have "a will of her own," but forced, contrary to her own volition, to turn away from anyone in such an unceremonious and eccentric manner.

Many efforts were made to cure her, which skill and experience could suggest, but with-

<sup>\*</sup> The clydo-mastoideus muscle.

<sup>†</sup> Another lady, also a teacher and mistress of a boarding-school, told me she had been somewhat similarly affected.

out any marked mitigation of this unpleasant state. Nay it was observed that the proposed remedies only aggravated the symptoms, as the repetition of the convulsive twitching in her neck increased with greater intensity of action, and the intervals between the attacks became of less duration.

In this state of health she consulted me, and after satisfying my own mind, I communicated my opinion of her case, assuring her that the most anomalous nervous affections were manifested when the actual source of the disturbance was free from pain. The lady then submitted to my proposed treatment, and the neck-turning tendency ceased, and the muscles soon lost their acquired rigidity.

Like the previously narrated case, this one demonstrates with clearness, as cause and effect, that the peculiar abnormal condition of the muscles was induced by the diseased masticatory organs.

There is one other fact worthy of consideration, from the interesting peculiarities connected with it, that the muscles may become rigid, in some cases of dental irritation. The following case of spontaneous catalepsy is selected from many others which have occurred in my practice:

Mary A—, a short and very pretty young woman, came for my advice, and stated that she had very severe pain in her ear, face, and neck, which sometimes seemed to run all down her. I suggested the removal of a badly decayed wise tooth. When she sat down she began to tremble, and her face became an ashy whiteness. She was assured that the pain would be very trifling, yet she continued to be greatly excited, and cried bitterly, saying, "I dare not let anyone else take it out!—that I dare not!"

That she dreaded the operation might be presumed by her restlessness, moving her head from side to side. Then she slid downwards on the chair, and grasped my arm convulsively, and betrayed symptoms of hysteria. I nevertheless persisted, and the tooth was removed. Up started my patient,

with a bound and with a wild scream of joy, exclaiming, "O, thank you, it's out—O, how glad I am it is out!" And then she sank backwards on the chair, and became most fearfully cataleptic, every muscle in her body being in a state of rigid extension. And yet she never lost her consciousness. After the application of friction to the limbs for an hour, she recovered the use of them; and then there was a slight return of the hysterical sensation. This passed away, and she left quite well, with the exception of a feeling of languor.

In this instance the dental irritation involved the spino-nervous system,\* but not the brain, if we may judge by the different phenomena. But we shall now be speak the attention of our readers to another class of affections, where the brain has been functionally disturbed, from the causes under consideration, and they furnish important data in the treatment of neuralgic maladies.

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<sup>\*</sup> The excito-motory system of Dr. Marshall Hall.

SIMULATED HYSTERICAL EPILEPSY.—Miss L—, a young lady, between nine and ten years old, of a purely nervous temperament, was attacked with some kind of fit, which resembled one of the thousand-and-one species of hysterical affections. In her case there was an entire loss of consciousness, and symptoms resembling epilepsy.

When I was sent for she was in bed, and it was said that the fits had been for some days past in greater intensity and duration, and that she had not derived the slightest mitigation from the medical treatment.\*

Her brain and spine were well formed. She was very pale and weak, and each time she recovered she uttered a feeble and moaning cry, and then relapsed again into a state of languid unconsciousness.

It was during one of these fits that her mouth was examined, as it was deemed

\* There is an especial interest in this case, which distinguishes it from the ordinary course of this class of affections, as in the latter they are only manifested after puberty. probable that the source of this nervous disturbance existed in that locality. My experience enabled me to decide that such was the fact, and then the irritating bodies were pointed out. The result proved this diagnosis to be correct.

There were four teeth removed. Three of them did not exhibit any marked difference from the ordinary appearance of the teeth under any inflammatory condition of the mouth; but the fangs of the fourth tooth were of a deep red colour, as if the vessels of the dentine had been injected with vermilion. It was the latter tooth that had induced all the mischief, which was evident from the fact, that the young lady had not any fit after the operation.

As this section of the subject furnishes a mass of mixed evidence, illustrative of the many forms of anomalous cases of cerebral disturbance, it may be important to cite a few more instances, as being full of interest and instruction.

The wife of the Rev. J. W-, had suffered

for some years from tic douloureux, which ultimately rendered her brain so irritable that she could not sleep: or if she did, the slightest movement roused her.

She was very thin and highly sensitive, being of a nervous temperament. And what with severe pains in her face, her constant vigilance, and bad appetite, rendered her health worse and worse, and if there had been any longer delay in procuring certain relief, there is every probability that permanent mania would have been the consequence.

She was urged by a benevolent physician to consult me, as he thought her unmitigated agony might be from diseased stumps.

When she came to my room, she was much excited. There was a wildness in her appearance and manner; her features became an ashy whiteness; and when she attempted to speak, her tongue was paralysed.

I requested her to be seated, and not agitate herself, for at the cost of a little pain.

she might ultimately have an immunity from all future suffering. All was lost on this self-torturer.

Afterwards she mechanically sat down, but immediately jumped up in a state of the most excessive excitement, and with hysterical shrieks, she exclaimed, "Don't punch them out !-- Don't punch them out !" And in an instant there was a fearful change in her aspect. Her face then became flushed, her eyes most bright, and with a wild look, she stood in an attitude of defiance, as if prepared to resist force with force. She was indeed a fearfully interesting spectacle of one spectre-stricken. But her horror arose not from the terror of gazing on the tenantless forms of the grave; it was from the dread of some frightful but equally shadowless forms. Her imagination was haunted by the formidable appearance of a large hammer and a barbarous-looking punch, which engrossed her undivided attention.

When addressed in the kindest manner, she did not heed it. She appeared in a

waking dream. The muscles of her body became then suddenly rigid; and when I touched her she gave a most painful cry, and then she went into, what many might have pronounced to be, an epileptic fit; but the muscles immediately relaxed, and her whole body became flexible, although she seemed to have lost all consciousness.

Her husband requested me to operate, as he was fully convinced that if the state of her mouth was not the cause of her indisposition, it might have greatly aggravated her suffering and nervous irritability.

I therefore removed a number of inflamed stumps during the fit, and could not help remarking that scarcely a stain of blood could be seen, and that, therefore, the saliva which flowed from her lips was colourless. But when she recovered, there oozed out of the sockets the usual quantity of the vital fluid.

Her first words were, "O, I am quite free from pain!" Her features became calm and placid; and after sleeping on the sofa for an hour or two, there was a perfect metamorphosis, and with many expressions of gratitude, she declared that she felt better in health than she had been for years.

It is worthy of observation, that the form of fit which most resembles true epilepsy, is often induced by excrescences at the extremity of the fangs, particularly when there exists an irritable condition of brain. Yet this kind is easily distinguished from the true affection, which results from lesions of the organ of mind, or its membranes.

A lady of rank, who was particularly fair, very thin, and of a highly susceptible temperament, became suddenly affected with a very strange malady, after she had undergone more than usual excitement.

She was observed to look with a particularly vacant expression, without intimating that she was suffering from any pain, and then, after a brief period, to fall back in her chair in a fit. In this state she was conveyed to bed. A medical man was sent for, who pronounced that the patient had had an

attack of epilepsy, to the alarm and horror of her husband and friends.

She recovered for a short time, but soon had a relapse. Whilst these fits lasted she lost all power or volition over the muscular system; her breathing was difficult, and when restored to consciousness, she was altogether oblivious of everything that had occurred: phenomena which so much resemble the actual cases of epilepsy, that without great experience, any one may have formed the wrong conclusion we have intimated, as to the actual source of the disease.

She continued to have them at different intervals, and yet it was patent to all who knew her, that she had never had any symptoms of disease of the brain before the then alarming attack.

In all her antecedents she had been remarkable for her mildness of temper and amiable manner; and that she was very urbane, pursuing "the even tenor of her way," the beloved of relatives, and esteemed of strangers.

It was remembered that she had occasionally complained of pain in her ear and side of the face, although not as being very acute.

On her removal to her own residence, the family physician was sent for, and he strongly advised that I should be requested to examine the mouth, as it was very possible that the source of the nervous disturbance might be in the *buccal* cavity.

Confirming the correctness of this diagnosis, I proposed removing the two last grinders; and, as had been predicted, there was at the extremity of the fang of one of them, a large fungous appendage, which had caused the socket to be greatly enlarged by absorption, from which a rather copious discharge of matter issued.

The result was highly satisfactory, for the lady had not, after the operation, any return of the fits.

There is one other instance worthy of a passing notice, as it will confirm a previous statement, that when there is an undue dis-

turbance of the system, from any foreign growth, that the weakest organ is predisposed to become seriously affected.

Miss B— had for some few years laboured under that form of insanity which is popularly termed flightiness. She was obliged to have a keeper, although it was observed that she was more mischevious than malignant. It was said that she had inherited this tendency to cerebral disease. In her ordinary state she was very taciturn and harmless; but when under certain conditions of health, there were what are called, paroxysms of temper, in which she would destroy everything which she could get into her possession.

Just before the time I was consulted, there had been some faint hope of her recovery; but this anticipation was not realised. For she was suddenly affected with severe pains in the head and face, and from this period she became actually worse. Her mental irritation assumed a maniacal form. At intervals she was calm, and then she

complained of pain in her mouth, and expressed a wish to have some of the teeth extracted. To soothe and pacify her, she was promised that this should be done, without the remotest idea that she would submit to such an operation, even if it were necessary.

When she came to my residence, she was in a very excited state, but submitted to an examination; and when I gave it as my firm conviction, that she would be greatly benefited if the diseased organs were removed, she immediately consented. One, as in the last-mentioned case, had a polypus growth at the extremity of one of the fangs, and the alveolar abscess extended beneath the roots of two or three teeth, and found a vent at the septum of the affected socket.

It was soon perceived that this local irritation had greatly aggravated her brain-symptoms, which gradually subsided, and she ultimately recovered a more healthy condition of the mental faculties.

Thus from such abnormal growths there

may be many anomalous forms of nervous disease result; but under some conditions there may be induced chronic affections of the mental faculties. And should the primary source of disturbance remain undiscovered, it is probable that actual madness would be the consequence.

To illustrate the accuracy of these statements, we cite the following case; its importance will be obvious.

Mr. P—, a gentleman of fortune, had complained for some years of pains on the right side of his head and face. The affection was not constant, but intermittent; but was greatly aggravated under any unusual excitement, or when he indulged in any excess at the festive board. Then the pain increased, and extended to his arm and hand.

Blisters, tonics, counter-irritation, produced but slight and temporary mitigation of the painful symptoms. In the process of time he had to endure constant agony, and, under a sense of desperation, he determined

to visit some of the principal cities of Europe, if not, like another Rasselas, in search of happiness, still with the hope of some amelioration. He was encouraged to persevere in his proposed tour, under an impression that change of scene might effect a remedy, particularly as it was the opinion of his physician that he suffered from mere mental hallucination.

He visited Paris, Berlin, Vienna, and other places where eminent medical men resided, but without any advantage, and he returned to England worse in his bodily health, and so greatly depressed in spirits, that he had an habitual expression of melancholy.

His physician, a most clever man, long since dead, urged him to consult me, saying, "that his affection might be caused by some diseased teeth;" but he answered, in the most peevish manner, "that he had consulted some most eminent men, who assured him that his mouth had not anything to do with his distressing malady." And in the

bitterness of his jaded mind, he added, "Every one had reiterated that his sufferings resulted from some obscure nervous disease, which time or accident might reveal!"

And my esteemed old friend who reported the above facts, declared, that his excited manner and dejected look, would have elicited the pity of the most obdurate.

In most diseases it is a matter patent to every observer, that if they are not cured or mitigated, they are likely to become worse. There may not be any long interval, where such remain stationary.—The progress may be a snail's pace for years; but at length comes the period of exacerbation, when the affection possesses an increased severity.

Such was the fact in the case of Mr. P—. His agonising pains increased to such a frightful degree, that, like a sensitive plant, every slight movement rendered him worse, and much more irritable.

One morning, in a fit of desperation, he sent for me. He was walking up and down the drawing-room in a most agitated manner,

and on my entrance he stopped suddenly, and advanced to meet me, saying, "I have sent for you, sir, but have not the slightest hope that you can mitigate my painful and pitiable condition."

He was the wreck of a fine man, with an expressive face, and that natural energy of mind which is manifested by a nervobilious temperament.

After some common-place observations, combined with many encouraging remarks, I examined his head and spine, which were both well formed; and then made a careful survey of his mouth. The teeth were wellarranged, and apparently sound. Those in the upper jaw rather pressed too closely against the glenoid cavities, the dens sapientize being forced out of its curve. And a more minute examination rendered it evident that the socket for the latter tooth was greatly enlarged. I therefore tried it with a small instrument it seemed probable that the source of his suffering originated in that locality. All

doubt was removed by this experiment; for my patient jumped up and yelled out,— "O, what agony!— what excruciating agony!"

He paced the room like a wild man, every now and then stamping with his foot, and holding his hand to the affected side of his face, repeating his ejaculation,—"O, what agony!"

Not being certain what he intended to do, I followed him, and expressed my conviction that all his previous suffering had been caused by that one tooth, which had just so seriously affected him.

A gleam of hope gave a less painful expression to his features, and he passively permitted himself to be led back to a chair; and soon the offender was forcibly arrested from the place of its concealment, where it had occasioned so much misery. There was at the extremity of the fang the largest polypus excrescence I had ever seen, whilst the thin watery discharge was particularly offensive. After injecting the cavity

with an antiseptic lotion, he turned to me with a most affable smile, declaring that his head and face were comparatively easy,—more so than they had been for years. He soon lost all pain in the socket, and in less than a month he had recovered his former health. And he never omitted an opportunity of expressing his gratitude for my timely cure; he having had an intuitive presentiment, that had the malady continued, he would soon have had to be removed to a madhouse.

The great difference which distinguishes simulated epilepsy from the actual affection, is this, that in the pseudo kind there is not any frothing from the mouth, nor any regular periodicity between the attacks, nor is there that intensely sound sleep which is invariably consequent on the approaching convalescence in true epilepsy.

In the simulated forms, the brain is too irritable; and although there may seem to be a loss of consciousness, it is only of short duration, having a resemblance to that brief kind which is experienced in an ordinary fainting fit.

If one might venture to speculate on the cause of nervous disturbance, there would seem to be some analogy between the phenomena of nervous life and electricity. The first is essential for every vital action, whether sensitive or motive; whilst every change in the outer world is affected by the latter agent. And what we call health in the one, or harmony in the other, results from these agents preserving an equilibrium of their respective forces.

For it would appear, that in the living organism, most diseases are induced by some disturbance in the nervous action of the parts affected; and that death in a part, is the simple consequence of an absolute deficiency of the supply of nervous life.

Taking these facts as data, it would seem that elevated function is induced by an excess of this agent. If such be the case, it may be presumed that a comparative deficiency of this living principle is the cause

of chronic forms of disease; whilst when it is supplied in excess, that there is then a tendency for the development of acute forms of suffering in any organ thus affected.

It is very evident, for example, that the lacteals and absorbents depend for their respective functions on nervous power. But then, when the supply is not equal to the demand, they manifest this state, by a tardiness in their respective functional capacities. And that when the supply is greater than is actually necessary for their normal condition, then they act with such an intensity of power, that it approximates to a diseased action. Nervous power is essential for the health of all the organs of animal and vegetative life. The heart would cease to beat without it, or the lungs to decompose the atmospheric air, if deprived of it, &c.

It has been well remarked, that if the blood supplies material to keep the various organs in repair, it is the nerves which act as the workmen to appropriate it, and quicken the new matter, so that it becomes an integral and living part of the body. Whatever would, therefore, tend to disturb the vital harmony on which health depends, if the cause is ascertained and corrected, we, in other words, equalise the nervous forces.

And this is in accordance with the operations of Nature in the outer world. When, for instance, the electrical states of the clouds are charged differently, one plus, and another minus, and they approximate, a tempestuous condition of the elements takes place, and when the commotion ceases, there is induced an equilibrium in the electrical forces. And thus the temporary discord is compensated for by a state of atmospheric harmony.

Yet we do not contend that in nervous disturbance there is any actual similarity; but we merely presume there is some resemblance.

But that there is this difference, that when an organ is deprived of the living principle its abnormal condition may remain for years; and that a more active form of disease will be set up when too much of the nervous stimulus is supplied. That in the one instance a long and continued uneasiness may be experienced, and in the other various degrees of acute pain. But in either case, the disturbance in the nervous forces have not any positively inherent corrective power. The cause of the disturbance must be discovered, which we designate by the term diagnosis, and the means which observation and experience have furnished, must apply the remedy.

I am, &c., J. L. L.

## LETTER VI.

Observations on the state of nervous disturbance arising from sedentary habits; from over anxiety; and too much mental application.—Some remarks on the effects of repletion and deficiency of nutrition.—The effects of fevers, drains on the system, and other depleting agents, which act and re-act so as to affect special organs, and to derange both the powers of the mind and body.—Two very instructive cases cited, to illustrate these consequences.

Concluding with some reflections on the obvious fact, that the majority of the evils which affect poor human nature, are but the necessary penalties which result from an ignorance of the laws of the organic machinery.

MY DEAR SIR,—It would render my imperfect sketch still more defective, if I were to omit to notice, among other important matter, that there are many predisposing circumstances which induce morbid conditions of the nervous system, beside those already enumerated. For instance, how very prolific a cause of nervous disease, is sedentary occu-

pations, particularly in persons who are over studious, or those who sustain too much mental application in any pursuit:—such as clergymen; persons devoted to literature as a profession; or merchants who remain for too many hours in their counting-houses. In such individuals their nervous affections may be traced, in part, to neglect of active exercise in the open air, and from being deprived of the health-giving oxygen, and to the exhaustion of the brain, from its energies being over-taxed.

When the mind has been engaged in an excess of study, or from too long-sustained anxiety, the headache which results, may be either induced by a too active or a too feeble circulation in the anterior lobes of the brain. The one being marked by a sense of heat and throbbing; and the other by a feeling of great exhaustion and an incapacity to think.

But in either case, if these warnings are heeded, there may not be experienced any bad consequences. It may be further remarked, that sleep may be prevented when there exists a very weak, or a very active circulation: and that the deprivation,

"Of Nature's sweet restorer,"

may in itself induce temporary or permanent disease of the nervous system.

When the brain is affected by sedentary application, the stomach and its auxiliary organs are liable to be deranged. And if a similar course is persisted in, there are other bad consequences which result, besides a torpor of the whole alimentary canal, or morbid secretions which equally affect its healthy functions.

There may be, for example, great depression of spirit, which may be referred by the sufferer to a lesion of the organ of thought,\* instead of associating the effect

\* The word lesion requires to be explained to a non-professional reader. It being used to denote that some organic injury has taken place, that is, that some destructive process had resulted in the actual substance of an organ. Whilst a functional disturbance arises from mere slight derangement of the machinery, which may be easily adjusted.

with gastric or biliary disturbance. And yet there are well-marked phenomena to indicate the difference. So far as the subject is connected with the proposed object of this communication it may be affirmed, that when there is too great mental application, there is induced certain symptoms of mucous irritation; and one of the most ordinary consequences which result from this condition, is, that the masticatory organs become affected, and then they in their turn tend to aggravate the painful and deranged state of the organs of digestion.

We may also remark that plethora and depletion both tend to debilitate either particular organs, or the whole system, and must be regarded also, as among the causes which predispose to derange the nervous system and the brain.

Thus, for instance, if persons eat to excess; or drink large quantities of wine, spirits, and beer, for the particular pleasure they give to the organs of taste, or as provocatives to eat after the necessities of nature should be

satisfied, it may be observed that although the nerves of the stomach may be over-stimulated, yet they may still for some time not betray the actual injury done to them; but, ultimately, if these excesses are continued, this important organ, will, from the greater amount of labour it has to perform, be rendered incapable of sustaining its normal functions, and then acidity, flatulency, and a host of morbid consequences result.

And should any lesion exist in any part of the system, however remotely situated, it will be liable to suffer, in consequence of the apparatus which is destined to prepare the raw material for producing healthy nutriment, still greater deterioration. But the worst penalty which may result from the evil course of excess we have deprecated, is when the seat of thought is implicated. When such is the case there is often an incapacity to exercise the noble privilege of intellectual sequence, even on the most commonplace subjects.

Similar, and often more complicated, con-

sequences result when the bodily organs suffer from any excess of depletion. Not merely from a deficiency of food, but when there is an unnatural drain on the system: or from excessive mental labour without compensating for the extreme loss of nervous power, by nutritive diet, exercise, ablutions, and intervals of repose.

These states are induced by an inattention to the organic laws; and the causes for both conditions may be simply explained.

For we find in over-stimulation that there is an increased circulation of the blood; so also it is a matter of fact, that under debilitating influences, the circulation is feeble and irregular. And besides the bad consequences already noted, we have some solution to account for the intense suffering which is often experienced in any organ previously affected.

In the benificence of the Creator, he has intended that these unpleasant symptoms should be admonitory intimations of some departure from the laws of health, and thus

to induce his intelligent beings to avoid a repetition of their erroneous proceedings. When the aberration involves the muscular and nervous systems, there is more or less acute pain in the affected parts; and when it is the stomach whose laws have been outraged, there is nausea and sickness experienced.

When, however, the seat of thought is implicated, either by excessive exercise of the mental faculties, or from violating the laws of temperance, there may be simply a headache, or there may be a sense of stupor; or unnatural vigilance; or a feebleness and incapacity to give attention to any logical process. And as any functional derangement in the bodily organs may be cured if attended to in time, so may also mental disturbances, however complicated, as they form no exception to this rule: that is, if we heed the numerous and well-marked admonitions which in mercy are given us. But should these warnings prove insufficient. then, as inevitable consequences, there may

be anticipated more aggravated forms of disease. I am tempted to submit two examples, illustrative of these statements.

Mary M— lived as a cook with a wealthy merchant, who kept a most sumptuous table, and had dinner parties almost daily. There was an abundance of good things, amounting to waste, with an excess of wine and spirits. The consequence was that the servants who had any gastronomic tendency could gratify their taste even to repletion; and indulge in potations until their senses,

"Were steeped in forgetfulness."

And it so occurred that the cook did not form any exception.

In the process of time these excesses told a tale. It appears that in her early days she had very defective teeth, and soon these organs became actively diseased, as a punishment for violating the laws of health, causing her almost incessant pain. And to deaden the sensation she increased her doses of liquor. This, instead of mitigating the evil,

only tended to aggravate the sense of agony, until the crowns crumbled away, and then they became another source of injury; for she could not masticate. Under this new penalty she had to swallow her food unprepared. Her stomach demurred. There was a sense of fulness and pain in this organ, and so much acidity, that this became a constant source of depression to her spirits. At length, under a breaking up of her constitution, she had to resign her place, and she continued for some years to be merely a burden to her family.

Under the advice of an eminent medical man, she was put on a simple dietary, but she wasted daily. And with her gradual emaciation, there was another obstacle to recovery,—she could not sleep!

Her brain and nervous system were in a most irritable condition. Any simple movement, which would have been unheeded by others, affected her with extreme tremor, and hysterical sensations. Even her own breathing would rouse her from an occasional

imperfect doze. It mattered not how many weary hours of vigilance she endured, yet she had not for some years enjoyed any sound repose, even for a very brief period. Her life at length became a burden to her, and she was suspected of meditating an act of suicide, to put an end to her miserable condition. She was, therefore, strictly watched, and on one occasion, when the nurse dozed she had nearly accomplished her purpose of self-destruction.

A benevolent surgeon suggested, from the condition of her mouth, that probably it might have been the cause of her bad health and the consequent morbid symptoms. And particularly that the irritable state of her brain, which so effectually prevented sleep, might after all be occasioned by bad and inflamed stumps. He, therefore, requested my opinion, and gave this "living skeleton" a note for the purpose.

My own conviction confirmed the correctness of his *diagnosis*, and so I told the patient, when she, in a most magnanimous manner,

submitted to have extracted fourteen diseased teeth, besides many loosely embedded stumps!

Three months after this incident, a rather stout-looking woman was shown into my consulting room. She curtsied in a most respectful manner, saying she called to thank me.

"For what? I do not recollect ever seeing you!"

"Don't you recollect, sir, that you took me out a number of teeth and stumps, when Dr. Watts sent me to you?"

"Is it possible," I exclaimed, "that you can be the same thin, emaciated person!"

"Yes, sir, and I thought it my duty to call and thank you. For though I had not slept an hour at a time for years, yet on the very same night you had operated, I slept most soundly, and have continued to have regular rest ever since. I have never had any pain since, and I enjoy my food with a relish. So God bless you, sir, for you have made my life a blessing to me, instead of a constant misery."

I have given the particulars of this case, as it furnishes the most indubitable evidence that the deranged stomach had caused the destruction of the weakest organs; and that they in return had acted as extraneous bodies, inducing constant extreme local irritation, by causing a twofold reflex nervous action.

1st. Affecting the stomach, that it was rendered incapable of digesting the simplest diet, even such as is administered to a child.

2d. That there was induced a morbid irritation of the brain, which was rendered so susceptible as to be incapable of perfect repose.

We will now refer to the second illustration, as being equally instructive.

A young man, with a good brain and a nervo-bilious temperament, possessed great ardour in acquiring knowledge from his childhood, and was an observer of the most temperate habits. And until he acquired some little reputation, he had continued to

enjoy tolerably good health, save and except when his mental application had been more than usually great, then he suffered from acidity. But a short country walk, and abstinence for a day or two, usually restored him.

He left his native place, as he found that, although treated with kindness, he was never likely to be

"A prophet in his own country."

In the city to which he removed, he was treated as a sort of *lion*, having invitations to dine out every day; in consequence of which he was induced to drink large quantities of wine.

Soon after he was initiated into other animal excesses. Not being naturally very strong, the first marked injurious symptom he suffered, was, that he had most violent tremor in the morning, after his midnight orgies, which continued until he took a dose of "the fire-water." But this warning was disregarded.

He then lost all his colour, and became at the same time very irritable. And although he had still recourse to literary occupations, he seemed to derive neither pleasure nor advantage from his studies.

He continued this career, although at times his better sense made him recognise that he was on a moral volcano, which, if he could not escape from, would induce what was worse than death, a state of hopeless fatuity.

He heeded not these fits of temporary remorse, nor the friendly reproofs of those who esteemed him, but continued to drink, and to visit haunts of vice and debauchery. At length came the fatal penalty, he had earned for himself a prematurely broken up constitution, and appeared almost imbecile.

When, for example, he was reading a book, if asked "what was the subject," he would look up with a vacant stare, hesitate for a few moments, and then answer, "I'll look at the title-page." All, therefore, that he read, was evanescent. It was like writing any sentences on a very wet slate, which

could not be deciphered. And, as a matter of course, as he was incapacitated from appreciating knowledge, so he was quite unintelligible when he attempted to communicate it.

Fortunately for him, he had, when at this lamentable point of his history, a severe illness; and it was by this circumstance that his mind was saved from being absolutely and irretrievably wrecked. For although, when he became convalescent, he was in a state of extreme debility, he abandoned, by my advice, his previously debasing habits, and adopted, at my suggestion, some simple means, by which the health of his mind was quite restored; and he lived to atone for his temporary insanity\* by becoming an accomplished educator.

It is in such cases that it is important that only those practitioners should be consulted,

<sup>\*</sup> We are justified in calling one insane who for a time bids defiance to the laws of moral propriety, and who, despite his natural mental gifts, sacrifices all for low and animal cravings.

who have acquired a qualification, by an intimate acquaintance with the laws both of physiology and psychology. One who combines a correct knowledge of all the organic functions; and who can immediately mark any departure from normal health, whether affecting the vital organs, or causing any derangement of the mental faculties.

On reviewing the preceding data, although they can be regarded but as a mere sketch of an important subject, yet even so, there are certain reflections which are forced on our attention, almost with the certainty of positive demonstration.

For it would appear that ignorance is the predisposing influence of man's aberrations. Thus he violates the rules of health, from an ignorance of the organic laws of his body; and he becomes the slave of his appetites, from a still more fatal ignorance of the constitution of his mind.

These combined defects are the sources of innumerable physical evils; and of many

moral affections, as the result of his illregulated passions. And these not only embitter existence, but blight the nobler purposes of his being.

For when he repeats any actions which interfere with the performance of the bodily functions, he induces, by every such repetition, an actual habit, which assumes the force of a law, and which may ultimately act with such potency as to become indeed a second nature.

So it is also with the continued exercise of any mental emotion, whether for good or evil, the oftener any of such sensations are vividly experienced, the more certain the intense influence over the character. And thus, before he is aware of his perilous condition, he finds himself acting with a blind impulse: and it is generally some evil tendency which thus obtains a complete mastery over him.

Poor human nature is thus liable to be tortured by a passive submission in a course of error, which may be manifested by many kinds of immorality. And there is sometimes so little consciousness of danger, that the chains are forged and riveted, which may bind him indissolubly in his degraded position.

And often, when under the galling sensation which pains his higher sentiments, he has tried to break away from the baneful influence, he is as powerless as a straw, when tossed passively on a tempestuous ocean: both pursue their erratic course, until the one is arrested by some opposing object, and the other is saved by the vigorous efforts of an observer, who possesses a strong will and a cool judgment. The true way to rend asunder such moral bonds, is to avoid the source that forged them. For unless his ill-regulated habits are abandoned, and he unlearns that which proved but evil to him, he remains to clank his fetters, which are stronger than bands of iron, and frets and fumes his soul, because conscience rings in his ears his own criminality.

Nor is this the only consequence of evil actions; such as we now deprecate. For

there is stamped on his countenance an impress of sensuality, with an extreme vacancy, which often terminates in actual imbecility; with other indelible marks to indicate the nature of the sin!

There is besides great debility of body, pallor of countenance, and that very important indication of a defective mental condition, a bad memory.

If the unfortunate being is very young, he has a painful presentiment that it is useless to attempt to study, as all his previous readings are evanescent. And this arises from the brain of the sensualist being softened. There is in consequence not any retentiveness; and so weak are all impressions that like morning mists they are soon dissipated. Thus, in the morbid changes we are discussing, there is an ominous gloom, even when there had previously existed gleams of genius, which, if it had not thus been voluntarily destroyed, would have enabled the individual to throw around him some of its brightest rays, to illume all objects he

might contemplate, and to have revealed many hidden beauties in them.

Yes, the unfortunate victim of sensual acts, who might have walked in the meridian splendour of intellectual light, had preferred to crawl amidst the dull shadows of night, more painful to endure than Egyptian darkness.

Yet by a system of training, simple diet, and systematic exercise, with other means modified by the individuality of such an unfortunate being, he might recover his normal health and be restored to the full exercise of his mental sanity.

The figure of speech which the Bard of Avon has put into the mouth of Macbeth, has misled by its very ambiguity,—

1.1

"Who shall minister to a mind diseased?"

But it is now admitted as an incontrovertible truth, that whilst this notion was patent, many have been doomed as altogether hopeless cases, who might have been cured by those who possess our better know-

ledge, and sounder views of this important subject.

For we can now distinguish between the mind, and the brain by which its powers are manifested. And whilst it would be a vain attempt to effect a cure of any spiritual disease by the physiological laws, we can by the aid of this knowledge act on the organic instruments and restore disordered functions. And it is the latter conditions of the brain which constitute every form of mental derangement.\*

And hence in any attempt to cure the various kinds of insanity, great distinctions must be made between a temporary departure from mental health, from certain injurious influences acting on the delicate and complex organization of the brain; and those chronic forms which clearly manifest that

\* Insanity of the feelings may exist with an active intellect: and when the latter is injured or altogether destroyed by either sensual excesses, fevers, or drains on the system,—this condition is designated fatuity to distinguish it from idiocy from birth.

disorganization has taken place, and which therefore can only have their consequences slightly mitigated, although there exists, in such conditions, little actual hope of cure.

No one has had a greater experience than yourself, of the importance of these distinctions, and I have therefore ventured to allude to them in this brief summary on nervous disturbances.

I am, my dear sir,

Yours, &c.,

J. L. LEVISON.

19, Dorset Place, Dorset Square.

POSTSCRIPT.—In the preceding remarks, IGNORANCE and KNOWLEDGE are used as relative terms. For example, a mathematician may be ignorant of physiology; and one profoundly acquainted with the latter science, an imperfect linguist or historian, &c.

I have, therefore, not used the word ignorance in an invidious manner, but to enforce the necessity of some positive knowledge of man's organization, as he is indeed—

<sup>&</sup>quot;Fearfully and wonderfully made."

Mr. J. L. Levison, 19, Dorset Place, Dorset Square, may be consulted daily, from ten till five, in all Nervous Affections.

January 8th, 1856.

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